



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,276	04/13/2005	Yoshiyuki Kohno	35355/53	5069
23838	7590	11/21/2007		
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005			EXAMINER MATOCHIK, THOMAS L	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 11/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/531,276

**Applicant(s)**

KOHNO ET AL.

**Examiner**

Thomas Matochik

**Art Unit**

4134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

The applicant's amendment filed on 10/09/2007 was received. Claims 1-7 remain pending. Claims 1-3 have been amended. Claims 8 and 9 have been cancelled.

### ***Claim Rejections - 35 USC § 103***

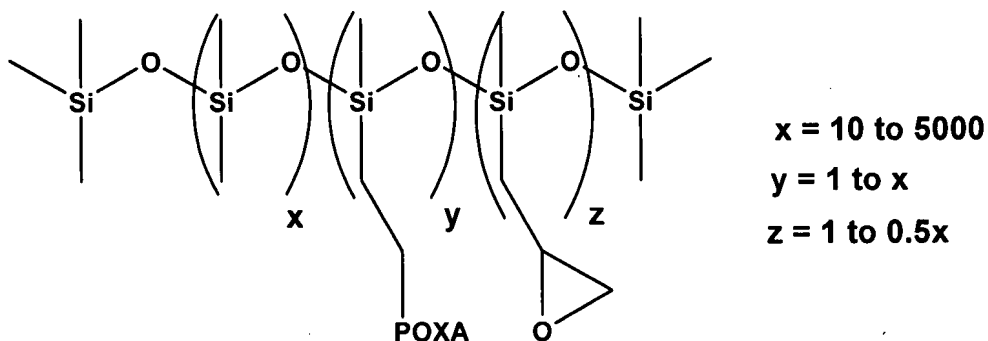
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pines et.al (US 4,184,004) and further in view of Eckberg et.al (US 5,539,013).

Regarding claims 1-3 and 5: Pines teaches a polyoxyalkylene polymer with an epoxy containing siloxane end group,  $MD_xD'_yD''_zM$  where M of formula I (col. 2, line 13) is  $(CH_3)_3SiO_{0.5}$  (col. 2, line 16), D is  $(CH_3)_2SiO$  (col. 2, lines 29-32), D' is  $CH_3R^1SiO$  (col. 2, lines 45 & 34), wherein  $R^1$  is a polyoxyalkylene unit (POXA), (col. 2, line 47) and D'' is  $CH_3R^2SiO$  (col. 2, lines 67 & 34), wherein  $R^2$  is a monovalent organic radical containing at least one vicinal epoxy group (col. 2, line 68). Pines teaches the epoxy group with either an alkyl or ether linkage between the hydrocarbon group and the epoxy group (col. 3, lines 30-34). Additionally, wherein  $x = 10$ ,  $y = 1$  to  $x$  and  $z = 1$  (col. 3, lines 13-50). See fig. 1 below.

fig. 1  
Reference US Patent # 4,184,004



Pines does not teach a polymer with an epoxy containing siloxane at both ends. However, Eckberg teaches a polyoxyalkylene polymer whereby there are epoxy containing siloxane groups at both ends (col. 5, lines 10-50). These epoxy groups contain from 2-20 carbon atoms. Pines and Eckberg are analogous art because they are from the same field of endeavor, namely epoxy functionalized organosilicone polymers. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the end group synthesis of Eckberg to the composition of Pines to obtain highly flexible, hydrophilic polymer.

Regarding claims 6 and 7: The patentability of a product does not depend on its method of production (MPEP 2113). Therefore the product as claimed has been taught by the references as set forth above.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pines et.al (US 4,184,004) in view of Eckberg et.al (US 5,539,013) as applied to claims 1-3 and 5-7 above and further in view of Umpleby (US 4,803,244).

Regarding claim 4: Pines does not teach a polysiloxane copolymer with a skeleton portion comprising a saturated hydrocarbon polymer selected from the group consisting of polyisobutylene, hydrogenated polyisoprene, hydrogenated polybutadiene and hydrogenated copolymers thereof. However, Umpleby teaches hydrosilation chemistry commonly used in the art to form polyolefinic/polysiloxane copolymers (col. 2, lines 58-65 and col.3, lines 8-23). Pines and Umpleby are analogous art because they are from the same field of endeavor, namely organosilicone polymers. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Umpleby to those of Pines in order to produce polysiloxane/polyolefinic epoxide containing copolymers, because the inclusion of a hydrophobic moiety will provide both a stain resistant and hydrophilic copolymer.

#### ***Response to Arguments***

Applicant's arguments filed 10/9/2007 have been considered, but are moot in view of the new grounds of rejection. Nonetheless, the following comments apply:

- 1 The applicant's argument as to the 35 U.S.C. §103(a) rejection of claim 4 is not persuasive in that (a) there would be motivation to combine the references by one skilled in the art so as to prepare a copolymer having both hydrophilic and hydrophobic properties, (b) the probability of success is high because of the known hydrosilation chemistry employed and (c) the references, when combined, do address all the claim limitations, as written.
2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., curability) are not recited in the rejected claim(s). Although the claims are interpreted in

light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

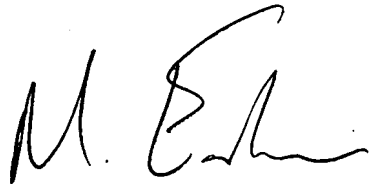
### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Matochik whose telephone number is 571-270-3291. The examiner can normally be reached on Monday-Friday 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TLM  
10/22/2007



MARK EASHOO, PH.D.  
SUPERVISORY PATENT EXAMINER